

## Data Set 1. Known Dinosaur Diversity Data

This Data Set gives abundance counts for the 527 known genera recognized by the authors. In each table, the top row gives the abundance count, and the bottom row gives the the number of genera having that abundance count ( $f_j$ ). For instance, in the entire Mesozoic, 309 genera are known from 1 individual, 55 genera are known from 2 individuals, etc. For the entire Mesozoic and for each subperiod, the estimated coverage for rare genera ( $\hat{C}_{rare}$ ) is also given. Abundant genera (those known from >10 individuals) are not used by the ACE calculation. See text for details.

Entire Mesozoic ( $\hat{C}_{rare} = .65$ )																					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	21	22	
309	55	38	18	18	8	9	4	4	2	3	6	4	3	2	2	5	2	4	1	2	
23	24	25	26	29	30	31	33	35	37	38	40	41	43	51	61	81	85	103	124	201	300
1	2	2	1	1	3	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	2

**Late Cretaceous** ( $\hat{C}_{rare} = .68$ )

1	2	3	4	5	6	7	8	9	10	11	12	13	16	17	18	20	24	25	26	29
136	19	17	7	13	6	4	2	2	1	1	4	3	2	1	2	3	1	2	1	1
30	33	40	41	43	51	81	201													
2	1	1	1	1	1	1	1													

**Early Cretaceous** ( $\hat{C}_{rare} = .60$ )

1	2	3	4	5	6	7	8	9	13	14	15	30	38	124	300
90	19	12	3	2	1	1	1	2	1	2	1	1	1	1	1

**Late Jurassic** ( $\hat{C}_{rare} = .69$ )

1	2	3	4	5	7	8	10	11	12	14	17	21	22	37	61	85
35	9	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1

**Middle Jurassic** ( $\hat{C}_{rare} = .51$ )

1	2	3	4	5	6	12	17	20	21	31
34	3	2	3	1	1	1	1	1	1	1

**Early Jurassic** ( $\hat{C}_{rare} = .73$ )

1	2	3	4	7	11	17	23	31	35	85
16	3	3	2	3	1	1	1	1	1	1

**Late Triassic** ( $\hat{C}_{rare} = .60$ )

1	2	3	4	14	15	17	22	23	24	31	103	300
16	5	2	2	1	1	1	1	1	1	1	1	1

Note that the data for individual subperiods do not sum to the data for the entire Mesozoic; this occurs because some genera occur in or are dated to more than one subperiod.

Computer code for running the analyses, written in R ([www.r-project.org](http://www.r-project.org)), is available upon request from S.C.W.